The Outlook for Consumption

By Ralph C. Wood

CONSUMER spending in recent months, adjusted for customary seasonal declines, has exceeded all previous peaks including the banner year 1929. Retail sales in the latter year aggregated between 48 and 49 billion dollars; July 1941 retail sales, seasonally adjusted, were at an annual rate of approximately 55 billion dollars. Total consumer expenditures, which include services as well as goods, have been estimated at 72 billion dollars for 1929, while the total for 1941 is expected to exceed 75 billion. As retail prices of goods and services are still roughly 15 percent lower than the 1929 average, the increase in the physical volume of goods and real value of services purchased is much greater than the comparative dollar volumes suggest.

Total retail sales during the first 7 months of 1941 were 18 percent above the same period of 1940, with retailers of durables recording a gain of 33 percent and those selling nondurables increasing sales 13 percent. The rise in the seasonally adjusted index of total retail sales is shown in figure 11. Part of the advance has represented higher prices; however, the physical volume of goods purchased has expanded about 13 percent.

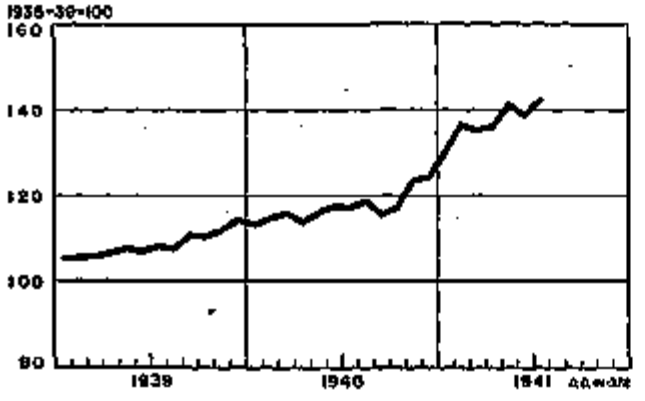

Figure 11.—Index of Sales of Retail Stores, Adjusted for Seasonal Variations, 1939–41 (U. S. Department of Commerce).

Examples of sales of individual commodities or individual lines of business in the first 7 months of 1941, contrasted with recent years, show even more clearly the extent to which consumer takings have risen under the impetus of the defense program. The record total of 2,894,000 passenger automobiles sold during this period exceeded by 35 percent the number sold in the first 7 months of 1940. Likewise, sales by independent furniture, household equipment, and radio stores were up by one-fourth and those of jewelry stores nearly a third.

The sales advance in nondurable lines was also sizable, though less so than in the case of the durables. Thus department store sales, which in July on a seasonally adjusted basis were back to the 1929 peaks, were up in the first 7 months by 16 percent over the same period last year, while rural sales of general merchandise, now higher than all previous peaks, were 19 percent ahead of 1940. Comparative sales increases for selected nondurable lines are shown in figure 14, page 20.

The Level of Expenditures.

It may be asked whether consumer expenditures this year have been abnormally high in relation to income. Consumer purchases of course vary directly with changes in the level of income and employment, though the increase in expenditure does not for most individuals equal the increase in income, as part of the latter is saved.

From the standpoint of consumer expenditures, the past year—but particularly the past half-year—has been an exceptional period, not only because of the high and rising level of income but also because of such factors as the rate of rise, the outlook for a long-sustained period of great activity, scarcity of materials with indications months ago of the probability of output curtailment in some lines, and the fear of an uninterrupted price rise. All these factors might have been expected to create anticipatory buying, with a consequent expenditure volume greater than that which ordinarily would have accompanied an income rise of similar magnitude.

To determine whether retail sales have been out of line with expectations based on the past relationship of retail volume to income, estimates of retail sales in the first half of each year from 1935 through 1940 have been charted against income payments for the same periods, and a line of estimate fitted to the resulting scatter. As can be seen in figure 12, during the period covered a remarkably close association existed between income payments and retail sales. Because the derivation of each series was entirely independent, for all practical purposes, of the derivation of the other, the degree of correlation between them is highly significant.[1]

The dot representing the sales of all retail stores during the first half of 1941, the position of which had no effect on the position or slope of the line of estimate (which was fitted to the data for 1935 through 1940 only), falls squarely on the line. Although the fact

[1] Retail sales totals for 6-month periods as plotted in figure 12, as well as most of the sales estimates for the first 7 months of 1941 mentioned above (including the estimated sales increases for selected nondurable lines shown in fig. 14), are part of a series of retail sales estimates now being made by the Department of Commerce. The estimates will be presented in more detail in a subsequent issue of the Survey.

that actual and expected results were identical may be partly an accident, it is significant that the points for all half-years of the entire period are either on or extremely close to the fitted line. The chart suggests two conclusions: (*a*) that the relationship between income payments and retail sales is usually very close; (*b*) that the relationship during the first half of 1941 was very much in line with the pattern for recent years, so far as total retail sales are concerned.

In the middle and bottom sections of figure 12, sales of nondurables and sales of durables are plotted separately against income payments in half-year totals. Here chief interest attaches to durable goods sales for the first half of 1941 in relation to income, since anticipatory buying would have been expected to have a greater effect on goods of this character, under the conditions prevailing in recent months.

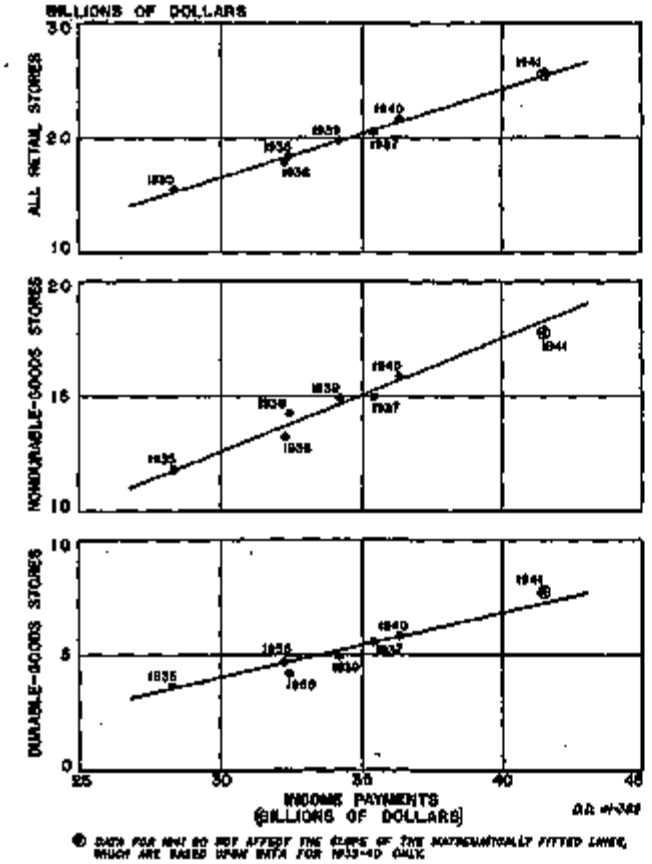

Figure 12.—Relationship Between Income Payments and Sales of Retail Stores for the First Six Months, 1935-41 (U. S. Department of Commerce).

As can be seen in the figure, the volume of such sales actually was higher than the amount suggested by the line of estimate as probable for that level of income. However, the amount of the difference cannot be considered very extraordinary, particularly in view of the margin of error to which the retail sales estimates are subject.

Figure 13, showing the relation of factory sales of household refrigerators, ranges, and vacuum cleaners to income payments, tends to support the belief that while some forward buying was undertaken by consumers, it was not extraordinarily large. As noted, the only data available are factory sales, and while these are not strictly comparable with retail sales the results of a correlation with income payments should not be significantly different.

If the large durable sales did represent anticipatory buying to any degree, one would expect a slight curb to be placed on the increase in purchasing of nondurables. For while consumer credit limits the immediate out-of-pocket drain caused by the purchase of an expensive durable item, down payments and monthly installments are usually substantial enough to compel many buyers to cut corners on their expenditures for other kinds of goods. Thus, it is not surprising that the increase in the purchasing of nondurables during the first half of this year fell somewhat short of the gain that would have been predicted from the line of estimate.

The Outlook for Consumption.

During the decade of the thirties the factor limiting the volume of consumption was the relatively low level of income. While the conditions responsible for this low income were complicated, they centered chiefly around the small volume of private investment. The physical resources of the country would have permitted a much greater output of consumers' goods and services in that whole period if the effective demand had been present.

Over the indefinite future, aggregate consumption will not be determined primarily by the level of income, but by the supply of goods and services available to consumers. Shortages of materials, equipment, plant (and possibly, later on, labor) will limit production of some specific goods and services. This limitation in turn would ordinarily restrict the rise in consumers' money income. However, the expansion of defense expenditures from 11 or 12 billion dollars in 1941 to better than 20 billions in 1942 will much more than offset any curtailment of consumer income caused by curtailed production of consumers' goods. Any increase in private investment will be still a further offset.

Increased taxes and savings (including purchases of defense bonds) will absorb some of the increase in money income of consumers. But as the added tax and defense-bond programs were designed in part for the very purpose of withdrawing funds of consumers in order to limit inflationary pressure on prices, it may be assumed that the extent to which these programs are pressed will be a function in part of the civilian supply of goods and services. If such supplies cannot be expanded sufficiently, or if aggregate supplies are actually reduced, the need for "mopping up" funds will be more urgent.

The outlook for consumption can therefore best be viewed by examining the supply situation in some of the major areas of consumer demand.

Consumer Durable Goods.

This is the area in which curtailment of civilian supplies will be most certain and drastic, for such production competes directly with defense for scarce materials. Moreover, it is the area in which equipment, management, and labor are especially adaptable to conversion for defense use.

Before the end of August, curtailment schedules had either been announced or were known to be under consideration for automobiles, household refrigerators, household laundry equipment, vacuum cleaners, metal furniture, and a number of other durable items. The general plan of curtailment provides for a relatively moderate cut at the beginning, but increasing enough in subsequent months to effect, for the model year now under way, reductions as high as 50 percent from output in the model year recently ended. Thus the auto cut, which for the first 4 months of the model year will reduce output only 26⅔ percent below that of the same months of 1940, must rise to 62 percent in the closing months of the model year to accomplish a 50 percent reduction for the full 12 months.

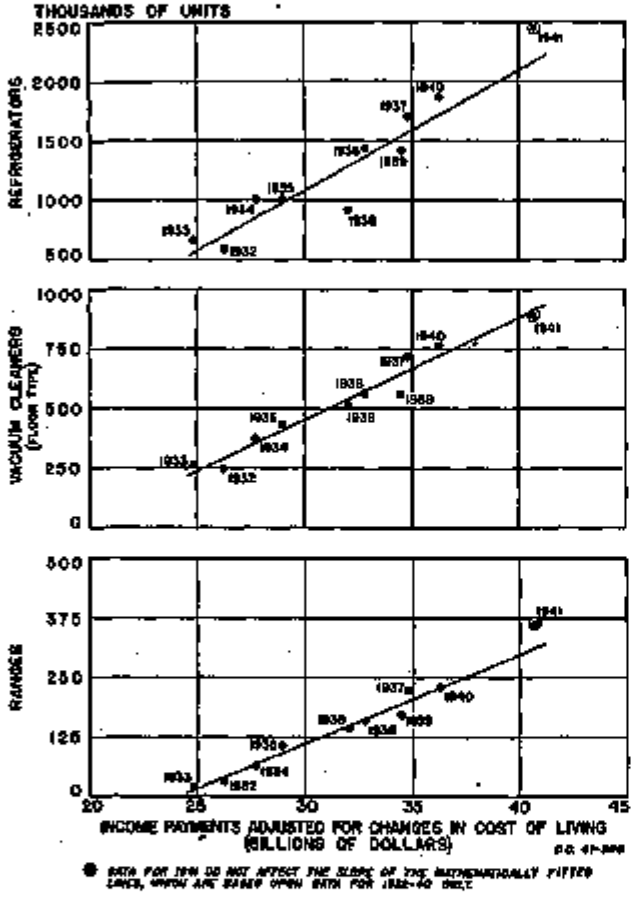

Figure 13.—Relationship Between Income Payments, Adjusted for Changes in Cost of Living, and Shipments of Domestic Electrical Appliances for the First Six Months, 1937–41 (Income Payments, U. S. Department of Commerce; Refrigerators, Edison Electric Institute; Vacuum Cleaners, Vacuum Cleaner Manufacturers' Association; Ranges, National Electrical Manufacturers' Association).

For the period August 1940 through July 1941, table 1 lists domestic shipments, with estimated value at retail, of a number of consumer durable commodities, including those for which restrictive measures have already been announced. It is obvious from the value figures that by far the greatest diversion of purchasing power and the greatest freeing of productive resources that would result from a horizontal 50 percent cut in output of all these commodities would be in the auto production cut.

Table 1 does not include radio and phonograph equipment, for which current output data are not readily available. Estimated radio and phonograph output for the domestic market in the period August 1940–July 1941 is believed to have had an aggregate retail value of roughly 600 million dollars. Sales of nonelectrical heating and cooking equipment (exclusive of installations in newly constructed houses) probably had a value at least equal to that estimated for radios and phonographs. The value of household metal furniture production is estimated very roughly at 125 to 150 million dollars.

Table 1.—Factory Shipments and Retail Values of Selected Consumer Durables, August 1940–July 1941

Item	Factory shipments [1] (thousand units)	Estimated value at retail (million dollars)
Passenger automobiles	4,200	3,800
Electric refrigerators	3,400	320
Washers	[2] 1,843	[2] 135
Electric ranges	670	85
Vacuum cleaners (floor and hand types)	2,000	90
Ironing machines	[2] 228	[2] 30

[1] To domestic market only.
[2] Total of July 1940–June 1941; no later data available.

If output of all items listed in table 1, together with radio-phonograph equipment, nonelectrical heating and cooking equipment, oil-burner equipment, and miscellaneous small electrical appliances (fans, mixers, hot plates, coffee makers, etc.), were to be cut 50 percent, it is estimated that the volume of expenditures on such goods would be reduced by nearly 3 billion dollars from expenditures during the 12-month period that ended in July. If the prices of the units sold next year are higher, the indicated reduction would be somewhat less.

Curtailment may not be applied to the entire group of items discussed above, and of the curtailments that are made, some may be less than 50 percent. The estimate of the magnitude of the reduction of expenditures must therefore be regarded as very tentative. In addition, reduced supplies of new consumer durables are likely to lower the rate at which old units are scrapped. This may increase expenditure for maintenance and repair, an important item for automobiles. Such expenditures will of course be conditioned in part by the ability of consumers to use their cars. In this connection the availability of rubber and gasoline will be of considerable importance.

Under the rubber rationing program announced by the Office of Production Management in June, rubber

consumption during the last half of 1941 will approximate 300,000 long tons, about 30 percent under consumption in the first half of this year and nearly 10 percent under the last half of 1940. Expansion of synthetic rubber production will not be rapid enough to eliminate in the near future the need for reduced consumption of crude. Annual synthetic production is expected to reach 80,000 tons by 1943—more than 4 times current synthetic production, but far below the annual rate of consumption of crude prevailing in the first half of 1941.

Curtailed rubber consumption will probably mean some reduction of tire production for replacement. About 40 percent of 1940 crude consumption went into domestic tire and tube replacements. To maintain replacement output at first half-levels in the face of a 30-percent cut in aggregate crude rubber consumption, consumption for all other purposes (including tire production for original equipment) would have to be cut around 50 percent. Reduced demand for original equipment resulting from the cut in production of passenger automobiles and light trucks will mean some saving of rubber, though not as high as 50 percent, especially in the first half of the auto model year on the basis of schedules now indicated. Demand for original equipment tires for heavy trucks is increasing.

Total tire stocks on July 1 were estimated at 13,877,000 casings, about equal to sales for 4 months at the rate of purchasing during the first half of this year. Though these stocks should cushion the impact of any curtailment, it would seem undesirable to allow stocks to be seriously drawn down merely to maintain current retail sales, at a time when the adequacy of future rubber supplies is still uncertain.

The petroleum supply situation as outlined in these pages in July was sharply modified by the announcement of plans to transfer 100 tankers from the Gulf-Atlantic coast trade to British use, in addition to the 50 transferred in May. In view of the prospect of increasing scarcity as the tanker transfer is carried out, a 10 percent cut in deliveries of gasoline along the Eastern seaboard was ordered on August 15.

The net deficiency in motor fuel supplies likely to result from the transfer of 150 tankers to British use is difficult to estimate. As the normal tanker complement prior to the transfer of the first 50 was about 400, transfer of 150 will mean a reduction of more than a third. This deficiency will be eliminated ultimately by construction of new tankers, barges, and pipe lines. None of these remedies will affect the situation materially in less than 6 months. However, it is possible that some foreign tankers acquired by the American Governments may be pressed into service, though these would not alter the situation appreciably.

Assuming that motor fuel supplies (which in 1940 accounted for about 40 percent of refined petroleum products) are only cut by the same proportion as total petroleum supplies, and allowing for some transfer by rail and for some sharing of the deficiency by the rest of the country (but not for the use of any foreign tankers) the net Eastern curtailment in the event of the transfer of 150 tankers might eventually reach 15 or 20 percent, instead of 10 percent. Private car use would be cut to an even greater extent since trucks, busses, and taxis will probably be curtailed not at all or less than privately owned cars.

Apparel: Silk and Rayon.

Limited raw material supplies and plant capacities in some branches of the textile industry will make for relative shortages of certain types of apparel, especially those branches using silk, nylon, and rayon.

Monthly raw silk consumption in the first 7 months of 1941 averaged 24,300 bales. Total stocks in or afloat to the United States at the end of July were in the neighborhood of 100,000 bales (including an estimated 35,000 bales in the hands of manufacturers). Thus, available supplies did not exceed 4 months' consumption at the January–July rate. In view of

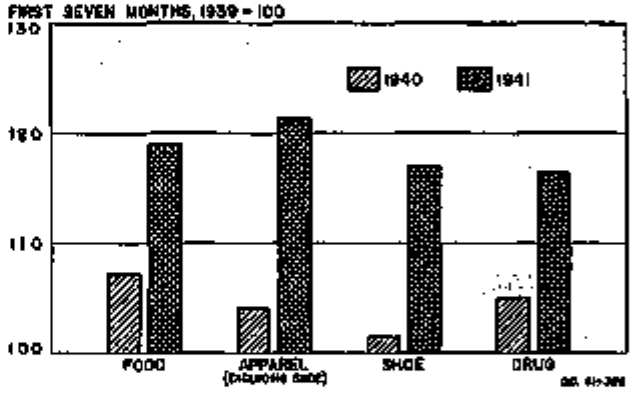

Figure 14.—Indexes of Sales of Retail Stores, by Selected Kinds of Business, for the First Seven Months of 1940 and 1941 (U. S. Department of Commerce).

this fact, and in view of defense requirements of substantial amounts of silk, the Office of Production Management on August 2 ordered the cessation of all raw silk processing by nondefense industries. Since 90 percent of raw silk consumption went into hosiery in 1940, this industry has borne the brunt of the curtailment.

Though nylon supplies are rapidly expanding, they are not yet adequate to fill the gap left by the curtailment of silk. Even after the doubling of nylon yarn capacity by the mid-summer of 1942, mills will be able to supply nylon or part nylon hose equal only to about 40 percent of 1942 full-fashioned hosiery requirements.

Increased amounts of rayon have been made available to former raw silk users, but the supply of rayon yarns suitable for use in the making of high quality all-rayon hosiery is extremely limited. Lisle and other suitable cotton yarns are also available for hosiery, and maintenance of sufficient full-fashioned hosiery supplies in the near future will depend largely on the

availability of acceptable cotton yarns. Fine-spun lisle is quite scarce, but domestic supplies probably can be augmented by importation from Britain.

Increased allocation of rayon to the silk industry has intensified the existing shortage in rayon, where yarn and staple fiber deliveries have been on an allotment basis for some months. Rayon output has been expanding, but is still inadequate to meet current demand. Table 2 shows the production, consumption, and stocks of rayon filament yarn, and production, imports, and total amounts available for consumption of rayon staple fiber, for the first half of each year from 1937 through 1941.

Table 2.—Rayon Production, Consumption, and Stocks, 1937–41 (First 6 Months)

[Millions of pounds]

First half of	Filament yarn				Staple fiber		
	Production [1]	Consumption [1]	End of June stocks held by		Production	Imports	Available for consumption
			Mills	Weavers			
1937	161	161	3	.....	9	14	23
1938	111	99	07	.....	12	7	19
1939	167	163	33	.....	29	24	43
1940	183	196	13	31	40	12	52
1941	218	219	5	30	62	18	62

[1] Includes production for export. Peak annual exports in this period were 1,094,000 pounds, in 1939. Exports in the first 6 months of that year were 734,000 pounds.

[2] Shipments to mills by domestic producers plus imports for consumption.

Sources: Textile Economics Bureau, Inc. (Rayon Organon). Figures on weavers' yarn stocks are from the National Rayon Weavers Association and the National Federation of Textiles, and are available only from December 31, 1939.

For 1941 as a whole, filament yarn deliveries will probably reach 450 million pounds, while staple fiber available for consumption is estimated at 130 million pounds. These totals would represent increases over 1940 of 15 percent and 31 percent, respectively. Despite these increases, supplies will not be adequate to meet demand. Rayon production is always on a continuous basis, so there is no possibility of expanding output (as there is in the case of cotton and wool textiles) by increasing to 2-shift or 3-shift operations. Planned capacity increases by the middle of 1942, if not delayed by raw material shortages, would provide a very small expansion in capacity.

Wool.

In spite of an all-time-high rate of mill consumption of wool there is no imminent serious shortage of raw wool supplies. However, some consumers of certain yarns and fabrics are experiencing difficulty in obtaining prompt delivery and in expanding operations to full 3-shift capacity. The quarterly wool stock report for the end of June showed that apparel wool stocks of 208 million pounds (scoured basis) at that time were 62 percent higher than in the middle of 1940, and were equal to 5 months' supply at the rate of consumption averaged in the first half of 1941. The stock figures include stocks held by and afloat to dealers, topmakers, and manufacturers; they do not include the fairly large quantities held on farms and ranches in producing States. Moreover, apparel wool imports for consumption, which in the first half of 1941 were more than triple those of a year previous, and which were equal to about 75 percent of mill consumption in the period, are expected to continue at a very high rate.

A similar situation exists in respect to carpet wool, as end of June stocks were nearly equal to consumption in the entire first half of the year. Carpet wool imports in the first half were about 20 percent greater than consumption. These are expected to continue heavy.

The wool supply picture is clouded chiefly by the extent to which we have become dependent upon raw wool imports for apparel use. In the 10-year period 1930–39, domestic wool production (both shorn and pulled) amounted to nearly 90 percent of domestic consumption of apparel wool. In 1940 the United States produced nearly 75 percent of her apparel wool needs, but 1941 domestic production (probably a new record output) will be less than half domestic consumption. Although a much greater share of imported wools is coming from Western Hemisphere (South American) sources than formerly, the position is still vulnerable to the extent that a steady flow of imports depends on an adequate supply of ships.

It has been estimated that domestic wool goods capacity can absorb 600 million pounds of apparel wool (scoured basis) annually, even without industry-wide 3-shift operation. Combined civilian and military consumption in 1941 will probably not exceed 500 million pounds (which, however, would be 35 percent above consumption in 1918, the previous record year). Of this total, roughly 350 million pounds will go into civilian use.

Despite ample raw wool supplies and over-all machine capacity, manufacturers of some clothing lines have had difficulty in obtaining sufficient cloth deliveries because a substantial amount of combing capacity has been heavily utilized in the filling of defense contracts. However, shortages of this character are expected to be temporary.

Cotton.

The cotton textile situation is also characterized by ample supplies of raw materials and generally adequate capacity for gray goods production, but with limited capacity for certain types of fabrics now heavily in demand. Domestic supplies of American cotton for the season beginning August 1 are currently estimated at about 23 million running bales, over 50 percent of which represent a carry-over from the season just ended. This total is nearly double the probable disappearance in the calendar year 1941.

Despite adequate raw cotton supplies, scarcities have existed in a number of fabric markets, including both fine- and coarse-yarn constructions. Ducks, sheetings, osnaburgs, drills, twills, and denims have been among the items chiefly affected by defense requirements.

Reduced burlap supply has produced a shortage of bagging, creating a heavier demand for osnaburgs, sheetings, and print cloths.

Although defense buying of cotton textiles has had a considerable impact on certain selected types of constructions, the increase in total demand for gray goods has affected almost all of the major classes of cotton consumption.

Shoes.

Plant capacity of the shoe industry exceeds any reasonable estimate of requirements through 1942. Production of footwear in recent months has been at the record rate of almost 500 million pairs per year; plant capacity exceeds this rate by at least 25 percent. Retail shoe inventories have been increasing, indicating that retail sales have not kept pace with the recent rate of production. Government buying will occupy a relatively small proportion of shoe production facilities; Army shoe purchases in 1941 will probably not absorb even 5 percent of total shoe output this year.

The limiting factor in shoe production is more likely to be in the supply of materials. No immediate shortage of hides is in prospect, but about 30 percent of domestic cattle hide consumption is now imported; and any interference with the import flow might well cause a stringency of supply. A similar situation exists for tanning materials for which the required import tonnage is almost as large as that taken by hides.

Food.

Domestic food supplies in 1941 are greater than in 1940, and the outlook is for a further increase next year. For most food items there will be no shortage in the sense of a reduction of supplies from previous levels; but production increases in some cases will be only moderate and will be partly absorbed by lease-lend shipments. Hence, the increase in consumption will be smaller than that which would occur if greater supplies were available.

Wheat supplies are more than ample, as the total for the crop year beginning July 1, 1941, is expected to be close to 1,350 million bushels, the largest on record and almost twice estimated consumption. As net exports last year were under 30 million bushels, and are likely to be small in 1941–42, a record carry-over is anticipated for the end of the current season.

In the case of meat, supplies in 1941–42 will probably exceed those of 1940–41, but it is doubtful if the increase will be sufficient to meet the increase in consumer demand at existing prices. Estimated hog slaughter will only be about 5 percent above that of each of the preceding 2 years, while expansion of marketings of slaughter cattle, as well as of sheep and lambs, is also expected to be moderate.

Egg production in 1941 should be at least 3 percent larger than in 1940, second highest production year on record. However, much of the increase in egg and meat output will be taken by the Government, either for use here or for transfer to other countries under lease-lend.

Supplies of white potatoes will be somewhat smaller during the coming year, while sweet potato production will be nearly 15 percent higher. The expected crop of 18 million bags of dry edible beans will be one-eighth larger than the record crop produced last season.

Supplies of truck crops for market during 1941 as a whole will probably be lower than total production in 1940, due largely to weather conditions which have reduced yields. Supplies of truck crops for processing, however, are larger, owing to the fact that canners contracted for much larger acreages of all processing truck crops for the 1941 season. In consequence, this season's pack of 12 important seasonally canned vegetable products (including tomatoes, peas, beans, sweet corn, beets, asparagus, etc.) will be nearly 20 percent larger than last season's pack. Partly offsetting the increased pack, however, was the smaller carry-over from last season.

Fruit supplies in the 1941–42 season will be only moderately larger than in the preceding season. However, production of manufactured dairy products—evaporated milk, butter, and cheese—has been at record levels in recent months.

Table 3.—Selected List of Purchases Made Under the Expanded Purchase Program of the U. S. Department of Agriculture from March 15, 1941 through August 16, 1941.[1]

Commodity		Quantity
Lard	pounds	177,906,670
Pork meat products (canned)	do	83,643,680
Pork meat products (cured and frozen)	do	128,186,690
Cheese	do	67,936,874
Dry skim milk	do	75,894,308
Dried eggs	do	10,112,252
Frozen eggs	do	65,490,870
Canned tomatoes (spots)	cases	1,384,661
Canned tomatoes (futures)	do	2,670,090
Dry beans	pounds	175,866,400
White potatoes	bushels	1,782,542
Soy beans	pounds	8,070,000
Fresh apples	bushels	1,823,755
Oranges	boxes	363,680
Dried apples	pounds	7,794,275
Dried peaches	do	4,641,200
Canned pork and beans	cases	1,687,286
Dehydrated soup	pounds	4,460,000
Oleomargarine	do	1,120,000

[1] These commodities can be used for domestic distribution to public aid families and for free school lunches, to meet requirements of the Red Cross for shipment to war refugee areas, for transfer to other countries under the terms of the Lease-Lend Act, or for reserve supplies which could be released upon the market when this is desirable.

Expanded consumer income has been the dominant factor in the increased demand for foodstuffs. But increased food purchases by the Department of Agriculture under its program of "food for defense" has also been an important market element. Some of the heavier purchases are listed in table 3. While total food purchases by the Department of Agriculture during each of the two fiscal years prior to 1940–41 averaged 100 million dollars, purchases since March 15 have been at an annual rate nearly five times as great and have been accelerating.

Significance of the Outlook.

The foregoing review of supply conditions in some of the major consumer goods industries has by no means covered all the cases where shortages may, in varying degree, be felt. Raw material supply and transportation difficulties in the furniture industry may have restrictive effects even if no formal curtailment program is adopted. Almost all consumer goods requiring metal, rubber, or plastics—cameras, toys, hardware, cutlery, musical instruments, clocks and watches, and coin phonograph boxes—are likely to feel the effects of material shortages.

Second to actual output curtailment for many durable goods, the fact that stands out most sharply in a review of the general supply picture at the present time is the recurrent indication that, because of limited materials or limited capacities, expansion of supplies of consumers' goods generally is becoming increasingly difficult. One transportation bottleneck is already hampering the use of a major form of consumer transportation equipment—passenger automobiles. Supplies of apparel, though not likely to be reduced (except silk hosiery), cannot be expanded anywhere near as much from present levels as was possible a year ago; output of certain textiles can scarcely be expanded at all. Total food supplies are increasing, but total demand is increasing even more. Under the general tendency for increased demand to outrun increased supply, conditions of apparent scarcity are entirely possible, since scarcity is at all times a relative concept.

The general tendency in industry after industry toward inadequacy of supply to meet demand suggests a number of possible conclusions. One is that the need for expansion of productive capacity in a wide range of industries is very great. Moreover, where inventories of scarce raw materials are unequally distributed, some better allocation may be made. A second conclusion is that systematic efforts should be made to teach consumers how to make existing stocks of goods render the maximum possible period of service. Third, the upward pressure on prices will grow before it diminishes; numerous indications point to the likelihood of a strong upsurge of prices of goods at the retail stage in the closing months of 1941, unless forceful measures are adopted by the Government agencies responsible for controlling such a development.

A final conclusion might be that the present period should favor the expansion of many of the service industries, notably domestic service, medical, and entertainment and recreation.

(Continued from p. 16)

Job-Breakdown and Worker Training.

Widespread inability to obtain necessary labor despite extensive unemployment would be a paradox contrary to all previous experience with the processes of economic expansion. Actually, the unemployed labor force will continue an important source of additional workers for defense industries, even though unemployed reserves of skilled and semiskilled labor suitable for defense manufacturing appear to be meager. The essential problem is one of skill requirements, and these can be reduced in a manner permitting a considerable part of the unemployed to be absorbed into defense plants, if needed.

Manufacturing processes are, to a considerable extent, adaptable to the skill characteristics of available labor. Thus, a complex process calling for a highly skilled worker can, as a rule, be broken down into a succession of simple processes requiring only a limited degree of labor skill readily acquired by previously unskilled workers. This procedure, known as "job-breakdown," "down-processing" or "dilution," has long been a feature of the technical evolution of large-scale industries.

Present skill requirements of the defense industries reflect, in many instances, production methods developed on a small scale under past conditions of labor supply offering large numbers of highly skilled workers. Those production methods are now being modified, and can be modified still further, in keeping with changed conditions of labor supply, as the defense industries expand their scale of output. To assist in this, the Labor Division of the Office of Production Management is undertaking to break down any defense production process for which skilled workers cannot be found, into units of labor skill that can be acquired by previously unskilled workers in a very short period of training. Such training has been provided to more than 1 million workers during the past year and double this number are expected to be enrolled in training programs over the coming year.

Given an adequate program of worker training, the effect of job-breakdown, which is equally adapted to nondefense plants, will be to make the unemployed (unskilled) labor force a fully effective source of supply for competent defense, as well as nondefense workers. It is possible, of course, due to lack of management initiative in breaking down job requirements in defense plants, or to time factors and frictions involved, that the defense industries may still need to draw some skilled workers from nondefense employment to an extent greater than the shift which will occur because of curtailment of civilian output in durable lines. However, the result would be merely to shift to nondefense industries a part of the task of assimilating unemployed labor into the employed working force. So long as the unemployed labor force remains adequate—and it appears that it will be so through 1942—such labor shortages as may develop should prove, in the main, to be temporary and localized.